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Aggarwal et al.(10) **Pub. No.: US 2015/0133068 A1**(43) **Pub. Date: May 14, 2015**(54) **TUNABLE RF N-PATH FILTER**(52) **U.S. Cl.**(71) Applicant: **Nokia Corporation**, Espoo (FI)CPC **H04L 27/148** (2013.01); **H04J 3/025**
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(57)

ABSTRACT

Methods and apparatus, including computer program products, are provided for tunable filters. In one aspect there is provided an apparatus. The apparatus may include a bandpass filter comprising a resistive-capacitive configuration of N-path filters tunable to a first center frequency based on at least a first clock frequency; a notch filter comprising a capacitive-resistive configuration of N-path filters tunable to a second center frequency based on at least a second clock frequency; and a combiner coupled to the bandpass filter and the notch filter to combine a bandpass output signal provided by the bandpass filter and a notch output signal provided by the notch filter, wherein the combiner outputs a combined output. Related apparatus, systems, methods, and articles are also described.

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